



*Sent via e-mail*

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Division of Energy Resources  
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**RE: Comments of the Alliance for Solar Choice on the Value of Solar Tariff  
Methodology**

Commissioner Grant,

The Alliance for Solar Choice (“TASC”) respectfully responds to the Minnesota Department of Commerce’s (“Department”) request for comments at the October 1, 2013 workshop (“Workshop”). Among other issues, the Department requests feedback on which value components should be included in the methodology used to establish the distributed solar value rate (“DSVR”). The Value of Solar (“VOS”) statute allows the DSVR to compensate owners of distributed solar generation (“DSG”) for the value their systems provide to the utility, its customers and society so long as those values are (i) known and measurable and (ii) can be accounted for as a cost or a benefit to a utility.

**I. The Methodology Should Consider All Values that DSG Provides to the Utility, its Customers and Society.**

The Department requests feedback on which value components should be included in the methodology used to establish the DSVR. Underlying this issue is the question of what factors the VOST statute allows the methodology to consider. Combining subdivisions 10(a) and (f), the VOST must compensate DSG owners for the value their systems provide to the utility, its customers and society so long as those values are known and measurable and can be accounted for as a cost or a benefit to a utility.<sup>1</sup> These statutory guidelines allow for the inclusion of a

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<sup>1</sup> See Minn. Stat. § 216B.164, Subd. 10(a) and (f) (2013). The language in subdivision 10(a) “the utility, its customers, and society” directs the Department to consider the value of DSG from not only the utility’s perspective but also from the perspective of a utility customer and society. These perspectives add important benefits derived from certain externalities to the scope of the study.

Subdivision 10(f) states: “The department may, based on known and measurable evidence of the cost or benefit of solar operation to the utility, incorporate other values

variety of values that DSG provides to the utility, its customers and society, a number of which were excluded from the Workshop presentation but should be included in the DSVR methodology.

The list included in the CPR presentation at the workshop, and subsequently e-mailed to parties, provides a number of known and measurable benefits that DSG provides to the utility, its customers and ratepayers. However, the list is incomplete and should be augmented. Below, TASC suggests a number of revisions and additions to the CPR list based on the list we submitted in opening comments.

#### **A. Environmental Value and Avoided Renewable Energy Costs**

As a number of parties pointed out at the Workshop, the CPR list of potential values confuses “Environmental Cost” with avoided RPS obligations.<sup>2</sup> These two values should be separate, and TASC’s opening comments provide a definition for each:

Environmental Benefits	The savings realized from reduced air emission control or allowance costs, including those related to carbon, criteria air pollutants and reduced water use.
Avoided Renewable Energy Costs	When customer-sited generation reduces onsite load, a utility does not have to procure as much renewable generation capacity to meet renewable portfolio standards (RPS). <sup>3</sup> This reduction in procurement obligations results in cost savings. In addition, the energy exported by customer-owned DG satisfies a utility’s RPS obligations.

Moreover, there are societal benefits from DSG’s environmental value that should be included in the methodology. TASC’s opening comments provide a definition for these values:

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into the methodology, including credit for locally manufactured or assembled energy systems, systems installed at high-value locations on the distribution grid, or other factors.” This section allows the department to include “other values” that DSG provides to the utility, its customers and society so long as those values are known and measureable and can be accounted for as a cost or a benefit to a utility.

<sup>2</sup> The CPR list defines “Avoided Environmental Cost” as the “cost to meet utility RPS obligations.”

<sup>3</sup> TASC discusses why VOST customer-generators should have the opportunity to serve onsite load below.

Avoided Environmental and Safety Costs	The reduction in costs related to fewer land use impacts because customer-sited DG is installed in the already-built environment; the savings realized from avoided accidents, pollution and economic loss associated with the extraction, transportation, distribution, and processing of fossil fuels that are avoided due to customer-sited DG; and the reduced compliance costs related to a decrease in the extraction, transportation, distribution and processing of fossil fuels that are avoided due to customer-sited DG.
Health Benefits	The reduction in societal costs from health risks, including reduced morbidity and mortality, related to air pollution from fossil-fuel production, transportation, and generation.

These values provide benefits to the utility, its customers and society and are known and measurable. Moreover, incorporating positive externalities such as avoided environmental costs, safety cost savings and health benefits into the DSVR will allow these values to be accounted for as a cost or a benefit to a utility and by extension customers and society.

## **B. Economic Benefits**

The CPR list defines economic benefits as “local tax revenue tied to net solar jobs.” It appears this definition stems from the language in subdivision 10(f) of the statute, which labels such benefits as “credit for locally manufactured or assembled energy systems.” However, the statute allows for, and indeed the Legislature’s intent requires, a broader and more comprehensive look at the benefits DSG provides. This definition should be expanded to include the following:

Effects on Economic Activity and Employment	The value from the increase in jobs and local economic development related to customer-sited DG and the resulting increase in welfare and economic productivity of children and working adults from the above health benefits.
Security and Resiliency of the Electric Grid	The savings realized from (1) the reduction in outages from reduced congestion along the T&D network, (2) the minimization of large-scale outages resulting from a more diverse and dispersed electricity supply, and (3) back-up power provided by customer-sited DG. These services provide benefits for the general body of consumers who rely on a readily available supply of electricity.

In addition to the above economic benefits, which should be included in the DSVR methodology, inclusion of the following factors will result in a more accurate portrayal of the value DSG, and, in turn, respond directly to the task laid out by Minnesota lawmakers:

Energy Market Impacts	Customer-sited DG reduces the demand for fuel to central power station generators and for wholesale power in the wholesale electricity market. Reduced demands in these markets lowers prices across the entire market served, providing benefits for the general body of consumers who use these markets.
Visibility Benefits	The increased recreation value and economic activity associated with improved visibility due to emissions reductions from power generation. <sup>4</sup>

## II. Other considerations.

In response to the Department's request, TASC reiterates the following points from its opening comments:

### A. Customers Should Be Given the Option to Serve Onsite Load.

TASC's opening comments discuss in detail the importance of allowing customers to serve onsite load. If the VOST does not give customers the choice between selling all output to the utility and only selling generation net of onsite load to the utility, the VOST risks running afoul of the Public Utility Regulatory Policies Act of 1978.<sup>5</sup> Moreover, the VOST could significantly lower the value proposition for Minnesotans to invest in onsite solar by increasing such individuals' tax obligations and reducing their ability to access federal tax incentives.<sup>6</sup> Anticipating that customers will be allowed to serve onsite load, and most will make that choice given these tax issues, the methodology should only consider electricity generated net of load, *i.e.*, net exports, in determining the costs and benefits of DSG.

### B. The DSVR Should Be Calculated Using a Long-Term Perspective.

As TASC discussed in its opening comments, the study should include DSG value over a timeframe that reflects the productive lifetime of a DSG system, typically between 20 and 30 years. TASC concurs with the CPR recommendation for a 25-year timeframe.

### C. Transmission and Distribution Line Losses Should Use Marginal Values.

Xcel Energy's September 20, 2013 Initial Comments on the Value of Solar Methodology state an openness to using marginal losses for the VOST methodology. TASC believe marginal losses are the appropriate measure of transmission and distribution losses from solar given that solar

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<sup>4</sup> This impact has long been quantified in traditional environmental impact analyses. *See, e.g.*, "The Benefits and Costs of the Clean Air Act from 1990 to 2020", Office of Air and Radiation, U.S. Environmental Protection Agency, p. 18 (March 2011).

<sup>5</sup> TASC's Opening Comments at pp. 2-3.

<sup>6</sup> TASC's Opening Comments at p. 3.

production coincides with heavier loading on transmission and distribution systems. Heavier loading leads to greater line losses, meaning solar helps offset higher marginal line losses. This benefit should be captured in the VOST.

#### **D. TASC Supports Comments of the Interstate Renewable Energy Council (“IREC”) on Quantifying Locational Benefits**

IREC’s September 20, 2013 Initial Comments on the VOST Methodology encourage the Department to include a high value location input in the VOST methodology. TASC agrees. IREC offers the example of the Long Island Power Authority (“LIPA”), which recently recognized that distributed solar can defer approximately \$84 million dollars in transmission upgrades if enough solar energy systems are brought online in identified locations. In order to promote the installation of solar in these areas, LIPA offers a cost-based adder of \$0.07/kWh to installers that locate systems in identified areas.

TASC agrees that utilities should identify high value areas, value the benefits DSG can provide in those areas via deferral of transmission or distribution system upgrades, and provide compensation commensurate with that value to DSG that locates in those areas. TASC agrees with IREC that this approach would comport with the concept embodied in the recent legislation and legislation in the past.

## **II. Conclusion**

TASC looks forward to discussing these issues with the Department and stakeholders at the October 15, 2013 workshop.

Respectfully submitted this 8<sup>th</sup> day of October, 2013.



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